

## **An Absolute Review on Strengthening of Scorched Concrete by Means of Bio Influenced Self-Medicate Mechanism**

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### **ABSTRACT**

The review study identifies research gaps in bacterial concrete as well as the benefits of using different bacillus strains to rehabilitate charred structures. A structural fire accident is an unfavourable circumstance that can occur at any time on the building. As a result, the structure's strength and durability will deteriorate, resulting in significant economic losses. Fire in the structure leads to prominent increase in crack and spalling of the surface concrete and to address this issue, retrofitting is one of the most effective techniques to ensure that a badly burnt structure is safe for future use with the help of bacterial concrete. Biomineralization is one of the most eminent techniques over a decade in auto-healing of cracks in the structure by itself with different bacillus strains such as *Bacillus subtilis*, *Bacillus pseudofirmus*, *Bacillus pasteurii*, *Bacillus sphaericus*, *Escherichia coli*, *Bacillus cohnii*, *Bacillus balodurans*, *Bacillus halodurans*, etc. Strengthening with the bacillus strain is the emerging techniques that give a good improvement in results and performance of the scorched structure. In this review paper we compiling the many research authors work in the understandable manner with subheading of appropriate techniques with results from the experimentation of various authors.

**Keywords:** *Bacterial Concrete, Scorched Concrete, Strengthening, Bacillus, calcium carbonate precipitation*